

CLAIMS

What is claimed as new and desired to be protected by Letters Patent of the United States is:

1. Apparatus comprising:

an input port for receiving a digital electrical or optical signal;
a modulator having an input terminal coupled to the input port and providing on its output terminal a radio frequency signal;
an optical transmitter having an input terminal coupled to receive the radio frequency signal from the modulator and providing on its output terminal an optical signal; and
a controller coupled to a control port of the modulator and to a control port of the optical transmitter, and having a user interface, thereby to control jointly the modulator and the optical transmitter.

2. The apparatus of Claim 1, wherein the modulator is adapted to receive one of an Ethernet or an ASI compliant digital electrical or optical signal.

3. The apparatus of Claim 1, wherein the modulator provides a quadrature amplitude modulated radio frequency signal converted onto a radio frequency carrier.

4. The apparatus of Claim 1, wherein a user enters as data to the controller at least one of a radio frequency power level, a number of radio frequency channels, a bandwidth of at least one radio frequency channel, and a type of modulation of the modulator.

5. The apparatus of Claim 1, wherein the user interface is SNMP (simple network management protocol) compliant.

6. The apparatus of Claim 1, wherein the controller determines at least a radio frequency attenuation or an optical power attenuation of the optical transmitter.

7. The apparatus of Claim 1, wherein the optical transmitter is a narrowcast transmitter.
8. The apparatus of Claim 1, wherein the optical transmitter outputs an optical signal having substantially a single wavelength.
9. The apparatus of Claim 1, wherein the controller receives at least one parameter from the user interface relating to operation of one of the modulator and optical transmitter, and determines at least one parameter relating to operation of the other of the modulator and optical transmitter.
10. The apparatus of Claim 1, further comprising a variable radio frequency attenuator coupled between the modulator and the optical transmitter.
11. The apparatus of Claim 1, wherein the controller determines at least one of a radio frequency attenuation, an optical attenuation, and a transmission power of the optical transmitter.
12. The apparatus of Claim 10, wherein the controller controls the radio frequency attenuator.
13. The apparatus of Claim 12, wherein the controller receives at least one command from the user interface and determines a setting of the radio frequency attenuator.
14. The apparatus of Claim 10, further comprising a circuit coupled to the output terminal of the optical transmitter thereby to measure a ratio of power of a broadcast portion and a narrowcast portion of the optical signal.
15. The apparatus of Claim 14, wherein the controller controls the radio frequency attenuator and an attenuation associated with the optical signal using the measured ratio.
16. A method of operating an apparatus coupled to receive a digital electrical or optical signal and to output an optical signal modulated by the digital electrical signal, comprising the acts of:

providing a single user interface for the apparatus;

accepting commands at the user interface; and

setting parameters for operation of the apparatus from the commands.

17. The method of Claim 16, wherein the digital electrical or optical signal is one of an Ethernet or an ASI compliant signal.

18. The method of Claim 16, wherein the optical signal is quadrature amplitude modulated.

19. The method of Claim 16, wherein the commands specify at least one of a radio frequency power level, a number of radio frequency channels, a bandwidth of at least one radio frequency channel, and a type of modulation.

20. The method of Claim 16, wherein the user interface is SNMP (simple network management protocol) compliant.

21. The method of Claim 16, wherein the parameters include at least a radio frequency attenuation or an optical output power attenuation of the apparatus.

22. The method of Claim 16, the optical signal having substantially a single wavelength.

23. The method of Claim 16, the apparatus performing radio frequency modulating and optical transmitting of the digital electrical signal, wherein the user interface receives commands relating to one of the modulating and optical transmitting and sets at least one parameter relating to the other of the modulating and optical transmitting.

24. The method of Claim 16, further comprising the act of variably attenuating an electrical signal in the apparatus.

25. The method of Claim 21, wherein the act of setting parameters includes setting a value for the radio frequency attenuation or the optical output power attenuation.

26. The method of Claim 16, further comprising the act of measuring a ratio of power of a broadcast portion and a narrowcast portion of the optical signal.

27. The method of Claim 26, further comprising setting the parameters using the measured ratio.